

Work Order ID 45206

Tuesday, February 16, 2010 10:38:32 AM



Page 1

Item ID: D350-748-201

Accept



Setup Start



Revision ID:

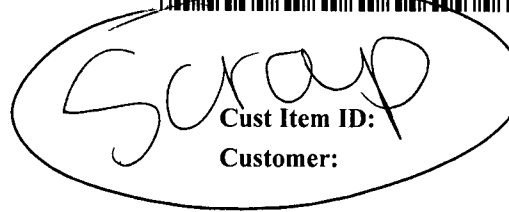
Item Name: Crosstube Installation, High Aft

Stop



Start Date: 7/15/2009 Start Qty: 1.00

Required Date: 8/3/2009 Req'd Qty: 1.00



Reference:

Approvals: Process Plan: *MF* Date: *10-2-16* Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D350-748-241	Rev E

100 0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD350-748-201 CHG001

110 0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D350-748-241 using CNC bender program D350A and Folio FT

120 0.00



QC15- Crosstube Dimensional Check

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 45206

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Item ID: D350-748-201

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Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00

Customer:




Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 	Crosstubes	0.00							
Crosstubes	Memo	0.00							
Crosstubes	1-Drill Tube as per Dwg D350-748-241 Using DT8876 Drill Jigs, <input type="checkbox"/> Set-up drill table as per QSI 010 <input type="checkbox"/> 2-Deburr <input type="checkbox"/> 3-Engrave Part # and Batch # as per Dwg D350-748-241 <input type="checkbox"/> 4-Remove all marks from tube within limits of D350-748- 241 <input type="checkbox"/> 5- Apply a light coat of LPS3 on t								
140 	QC6- Inspect dimensions to drawing	0.00							
QC	Memo	0.00							
Quality Control									
150 	Outsource process-Cadplate per QSI017 4.1.9.1	0.00							
Outsource3	Memo	0.00							
Outsource process - Cad plate	Issue P/O: _____ <input type="checkbox"/> Stress relief at 375° for 5 hours <input type="checkbox"/> Magnetic Particle Inspect per ASTM E1444 <input type="checkbox"/> Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2 <input type="checkbox"/> Embrittle relief at 375° for 8 hours, Chromate Treat: <input type="checkbox"/> Possible Supplier: Southwest United Industries <input type="checkbox"/> Ens								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Revision ID:

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Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging	Memo	0.00							
Packaging	Ensure certificate of conformity is attached								
170 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
180 	SprayPaint	0.00							
SprayPaint	Memo	0.00							
Spray Painting	1-Prime inside crosstube as per QSI 005 4.2; 12-Paint Outside of Tube as per Dart QSI 005 4.2								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Start Date: 7/15/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 	QC14- Inspect Spray Paint	0.00							
QC Quality Control	Memo Then, Wrap in plastic bag to protect from scratches	0.00							
200 	Crosstubes	0.00							
Crosstubes Crosstubes	Memo 1-Install Ground wire Insert, then insert screw and washer; 2-Install Abrasion strips as per Dwg D350-748-241 & QSI 035; 3-Install supports Using Dt8876 as per Dwg D350-748-241, Torque to 60-80 IN-LBS	0.00							
210 	QC5- Inspect part completeness to step on W/O	0.00							
QC Quality Control	Memo	0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 45206

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Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

230

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

240

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D350-748-
201 Location: _____ PPP Rev: _____

Work Order ID 45206

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Revision ID:

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Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 8/3/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

MF
10-2-16Please-
see original
w/o →

Picklist Print

Tuesday, February 16, 2010 10:38:32 AM

Work Order ID: 45206



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009

Required Date: 8/3/2009

Comments: IPP RevF: as per ECN09-696 09.11.20 DD verified by:EC

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L5		Purchased	No			120	Each	451.0000	4.0000			



Nut



Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 450

110382 10

111636 1

112314 16

113523 223

113537 200

Main Warehouse

ST139 1

112314 1

ALS4-1032-225

Purchased

No

200

Each

6,296.000

1.0000



Insert



Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 6296

107441 16

110768 6280

AN960JD10

Purchased

No

200

Each

0.0000

1.0000



Washer



Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 45206



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009

Required Date: 8/3/2009

Comments: IPP RevF: as per ECN09-696 09.11.20 DD verified by:EC

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2856-400RevA		Manufactured	No			200	f	0.0000	1.2432			
Abraison Strip												
MS21920-20		Purchased	No			200	Each	111.3000	2.0000			
Clamp (per MIL-DTL-8783C)												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	111.3	
103478	2	
106484	12	
109269	9.3	
110536	10	
112307	28	
112624	39	
112793	11	

MS27039-1-10

Purchased

No

200

Each

187.0000

1.0000



Screw

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	187	
112794	73	
112828	14	
112940	100	

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Shop Packet Print

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 4

Tuesday, February 16, 2010 10:38:32 AM

Work Order ID: 45206



Parent Item: D350-748-201RevD



Parent Item Name: Crosstube Installation, High Aft

Start Date: 7/15/2009

Required Date: 8/3/2009

Comments: IPP RevF: as per ECN09-696 09.11.20 DD verified by:EC

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD516 		Purchased	No			230	Each	0.0000	8.0000 			
Washer D3501-1RevA 		Manufactured	No			230	Each	0.0000	16.0000 			
Bushing D3502-1RevB 		Manufactured	No			230	Each	0.0000	2.0000 			
Support MS21042L4 		Purchased	No			230	Each	2,342.000	24.0000 			
Nut												

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

2342

102552

6

104248

6

110507

184

111827

1152

113422

994

15924

0

Tuesday, February 16, 2010 10:38:32 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____












Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 23/01/2009 8:49:52 AM
 User: Julie Dawson

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: 350/355 AS X-TUBE AFT
Job Number	: 45206	Part Number	: D350748201
Estimate Number	: 12486	Drawing Number	: N/A
P.O. Number	:	Project Number	: N/A
This Issue	: 23/01/2009 S.O. No. :	Drawing Revision	: D
Prsht Rev.	: NC	Material	:
First Issue	: / / Type : CROSSTUBES	Due Date	: 12/02/2009 Qty: 1 Um: Each
Previous Run	: 45205		
Written By	:		
Checked & Approved By	: <u>JLD 09-01-23</u>		
Comment	: Est Rev: A New Issue 06-07-05 JLM Est Rev: B Update qty of MS21042L5 06-09-12 KJ Est Rev C Combined manufacturing 08.04.02 EC verified by: DD Est Rev:D 08-06-24 revD as per dwg DD verified by:EC Est Rev: E 08.12.11 Step17 was step 21 KJ Verified by:		
Additional Product			
Job Number: 			
Seq. #:	Machine Or Operation:	Description :	
1.0	DC	DOCUMENT CONTROL	
			
Comment: Photocopy bluefile & type labels per PPPD350-748-201 A CHG001			
2.0	D350748241TRN	Crosstube Turning Detail	
			
Comment: Qty.: 1.0000 Each(s)/Unit : Total : 1.0000 Each(s) CROSSTUBE TURNING DETAIL batch <u>B-43680</u> <u>NB 09-02-05</u>			
3.0	BENDING	BENDING MACHINE - SKIDTUBES	
			
Comment: BENDING MACHINE Bend tube as per Dwg D350-748-241 using CNC bender program D350A and Folio FT <u>DP9-2-5</u>			
4.0	QC15	DIMENSIONAL CHECK OF X-TUBES	
			
Comment: DIMENSIONAL CHECK OF X-TUBES			
5.0	CROSSTUBES	CROSSTUBES RESOURCE 1	
			
Comment: LANDING GEAR RESOURCE 1 1-Remove all marks from tube within limits of D350-748-241 2-Drill Tube as per Dwg D350-748-241 Using DT8876 Drill Jigs, Set-up drill table as per QSI 010			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D350-748-201 PAR #: _____ Fault Category: Cross Lines NCR: (Yes) No DQA: 2 Date: 10.02.17
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: 2 Date: 10.02.17

NCR: <u>45206</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>09/08/05</u>	<u>3.0</u>	<u>Tube has a 1.1" twist from cuff to cuff. Tube is scrap.</u> <u>R.C. process.</u>	<u>[Signature]</u> <u>09/08/07</u> <u>QSI642</u>	<u>Process has since been revised to reduce the amount of twist to an allowable limit. I.D Tube as scrap - for eng lab / show use only. Place in back work steel.</u>	<u>[Signature]</u> <u>9-8-11</u>	<u>S</u> <u>01/02/17</u>	<u>[Signature]</u> <u>09/08/07</u> <u>QSI642</u>	<u>[Signature]</u> <u>06/08/05</u>

NOTE: Date & initial all entries

Date: Friday, 23/01/2009 8:49:52 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350/355 AS X-TUBE AFT

Job Number: 45206

Part Number: D350748201

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

3-Deburr

4-Engrave Part # and Batch # as per Dwg D350-748-241

6.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

7.0

OUTSIDE SERV.10

OUTSIDE SERVICES -skids



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: _____

Stress relief at 375° for 5 hours

Magnetic Particle Inspect per ASTM E1444

Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2

Embrittle relief at 375° for 8 hours, Chromate Treat

Possible Supplier: Southwest United Industries

Ensure Certificate of Conformity is attached

8.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

10.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside crosstube as per QSI 005 4.2

2-Paint Outside of Tube as per Dart QSI 005 4.2

11.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Then, Wrap in plastic bag to protect from scratches

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350/355 AS X-TUBE AFT

Job Number: 45206

Part Number: D350748201

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

12.0	D2856400	Abraison Strip
------	----------	----------------



Comment: Qty.: 1.2401 f(s)/Unit Total : 1.2401 f(s)

Abrasion Strip 7.10" long x2

Batch: _____

13.0	ALS41032225	Insert
------	-------------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Insert

Batch: _____

14.0	AN960JD10	Washer
------	-----------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Washer

Batch: _____

15.0	MS2192020	Clamp (per MIL-DTL-8783C)
------	-----------	---------------------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Clamp (per MIL-DTL-8783C)

Batch: _____

16.0	MS27039110	Screw
------	------------	-------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Screw

Batch: _____

17.0	D35021	Support
------	--------	---------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

SUPPORT

Batch: _____

18.0	CROSSTUBES	CROSSTUBES RESOURCE 1
------	------------	-----------------------



Comment: LANDING GEAR RESOURCE 1

1-Install Ground wire Insert,then insert screw and washer

2-Install Abrasion strips as per Dwg D350-748-241 & QSI 035.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350/355 AS X-TUBE AFT

Job Number: 45206

Part Number: D350748201

Job Number:



Seq. #:

Machine Or Operation:

Description :

3-Install supports Using Dt8876 as per Dwg D350-748-241,Torque to 60-80 IN-LBS

19.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

20.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

21.0

D35001

Saddle



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
350 SADDLE
Batch: _____

22.0

D35011

Bushing



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)
BUSHING
Batch: _____

23.0

AN46A

Bolt



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)
Bolt
Batch: _____

24.0

AN441A

bolt



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)
bolt
Batch: _____

25.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Bolt
Batch: _____

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Date: Friday, 23/01/2009 8:49:52 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350/355 AS X-TUBE AFT

Job Number: 45206

Part Number: D350748201

Job Number:



Seq. #:

Machine Or Operation:

Description :

26.0

AN960JD416

Washer



Comment: Qty.: 32.0000 Each(s)/Unit Total : 32.0000 Each(s)

Washer

Batch: _____

27.0

AN960JD516

Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Washer

Batch: _____

28.0

MS21042L4

Nut



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)

Nut

Batch: _____

29.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nut

Batch: _____

30.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

31.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-748-201

Location: _____

PPP Rev: _____

32.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

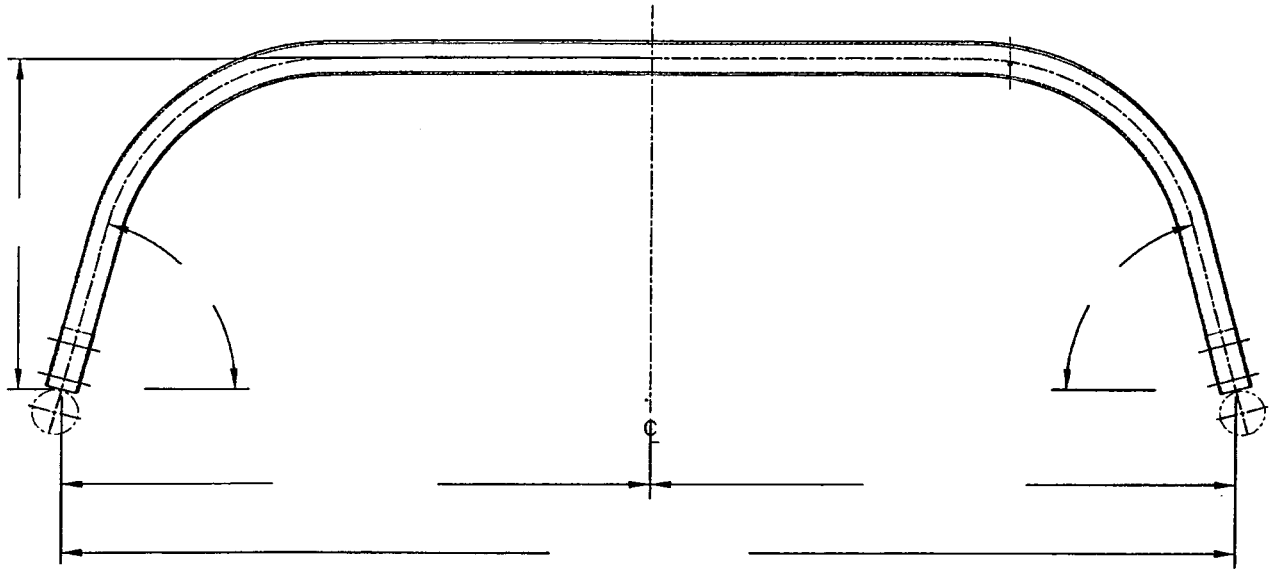
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 45200
Description: Crosstube High Aft (AS350/355)		Part Number: D350-748-201
Inspection Dwg: D350-748-241 Rev: D		Page 1 of 1

Required Dimension	Min	Max
Height	31.22	31.48
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06



Comments

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	<i>[Signature]</i>



DESIGN <i>qp</i>	DRAWN BY <i>qp</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>///</i>	APPROVED <i>///</i>	DRAWING NO. D350-748-241	REV. D SHEET 1 OF 3
DATE 06.10.31		TITLE CROSSTUBE (AS 350/355 HI AFT)	SCALE NTS
A	06.03.31	NEW ISSUE	
B	06.06.30	ADD D6018-125 & PRIME AND PAINT	
C	06.08.14	ADD CAD PLATING	
D	06.10.31	MAG. PARTICLE AND CAD PLATE AS MFD.	

RELEASED

06.10.31 *///*

QTY	P/N	DESCRIPTION
X	D350-748-241	CROSSTUBE ASSEMBLY (AS 350/355 HI AFT)
1	D6018-125	CROSSTUBE (OR D6015-125)
2	D3502-1	SUPPORT
2	D2856-400-710	ABRASION STRIP
1	AELS-1032-225	INSERT
1	AN960JD10	WASHER
2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
1	MS27039-1-10	SCREW

D350-748-141 CROSSTUBE:

- 1) MATERIAL: MANUFACTURED FROM D6018-125 OR D6015-125
FINISHED LENGTH = 122.70±0.06
- 2) MACHINE PER MACHINING DETAIL ON PAGE 3. BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITIONS SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 3) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 4) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 5) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING
- 6) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 7) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 8) INSTALL D2856-400-710 ABRASION STRIP WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 9) TORQUE MS21920-20 CLAMPS 60 TO 80 IN-LB
- 10) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 11) ALL DIMENSIONS ARE IN INCHES
- 12) PART IS SYMMETRIC ABOUT CENTERLINE EXCEPT FOR Ø0.297 HOLE.

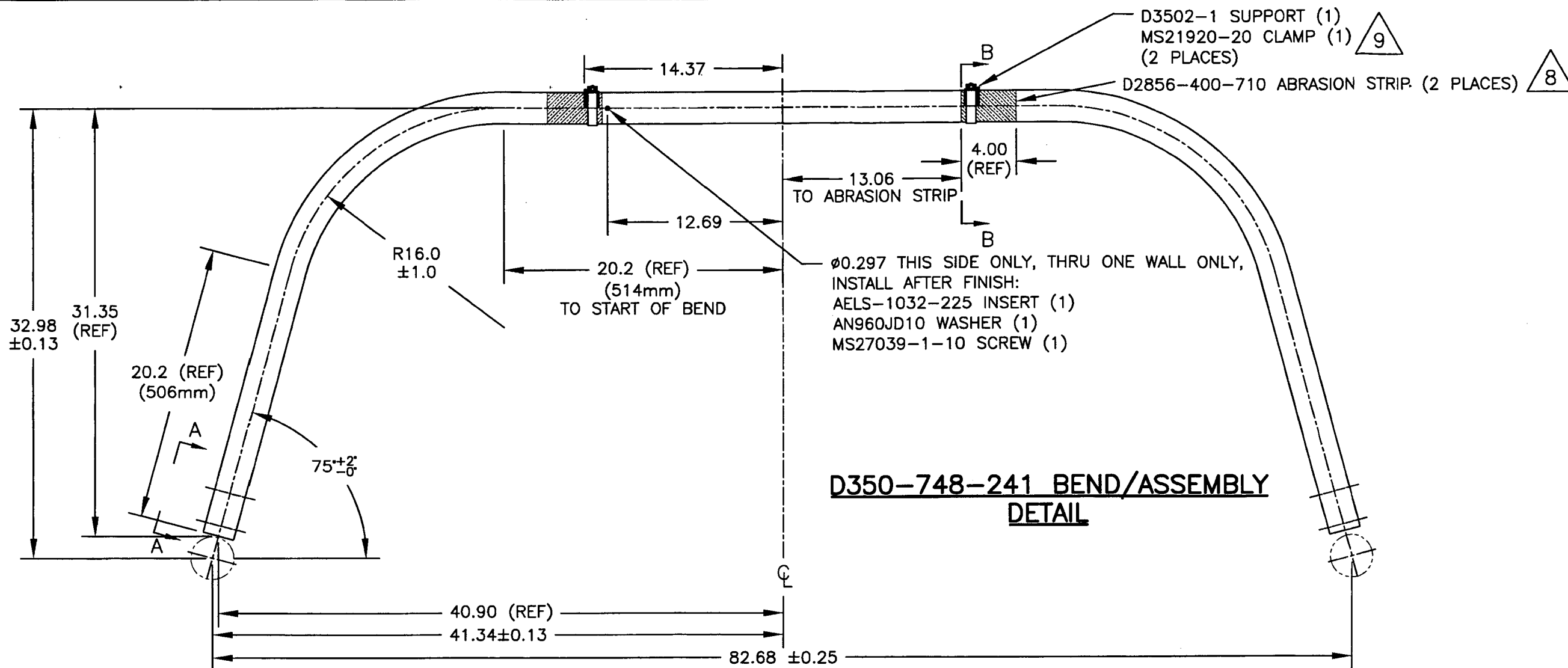
UNDER REVIEW

07.02/16 *///*

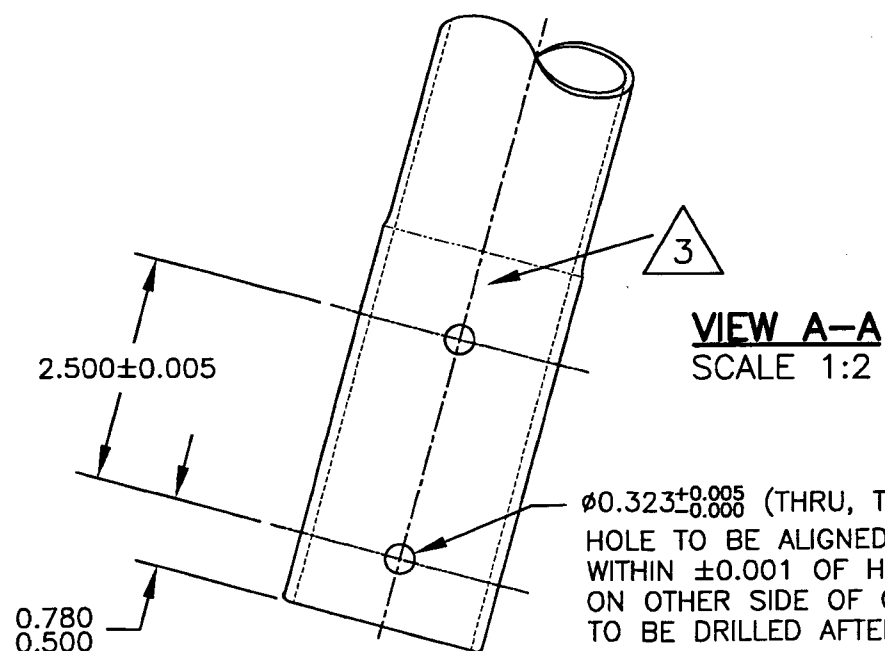
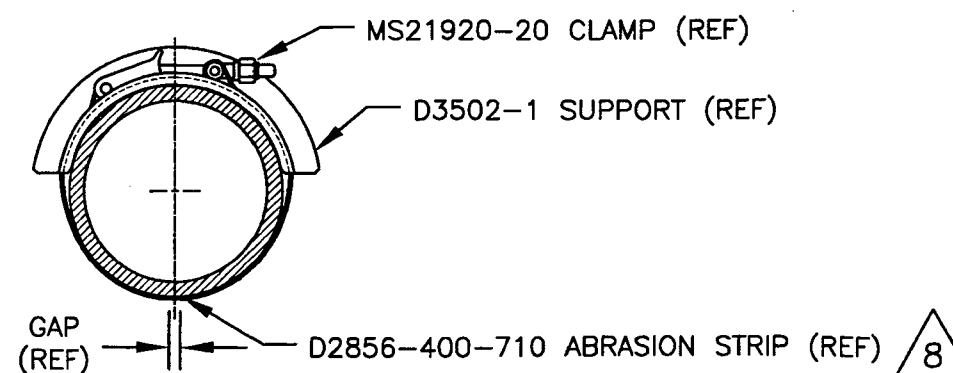
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SECTION B-B
SCALE 1:2

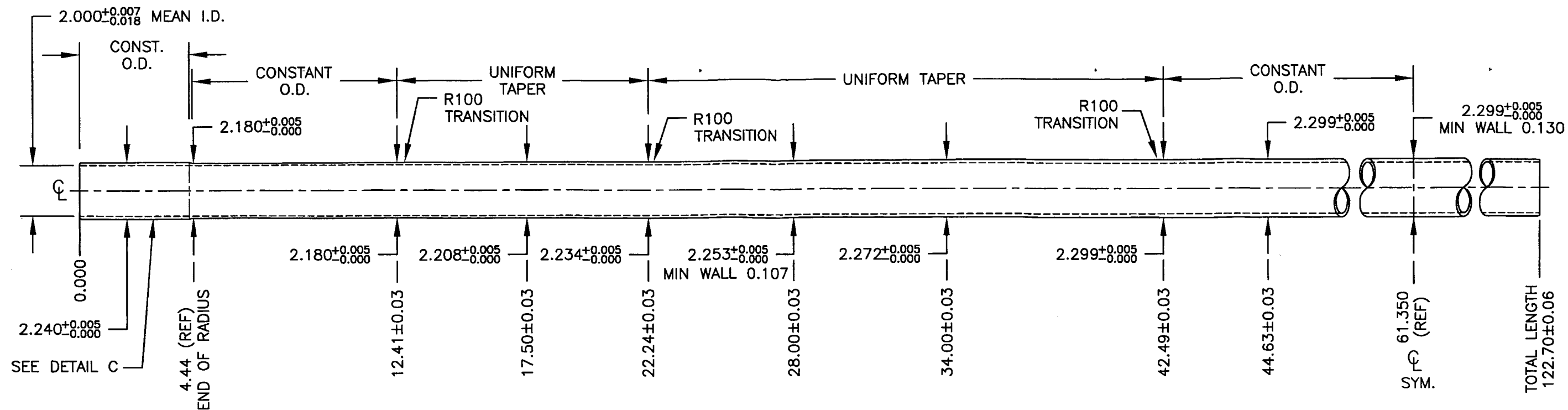


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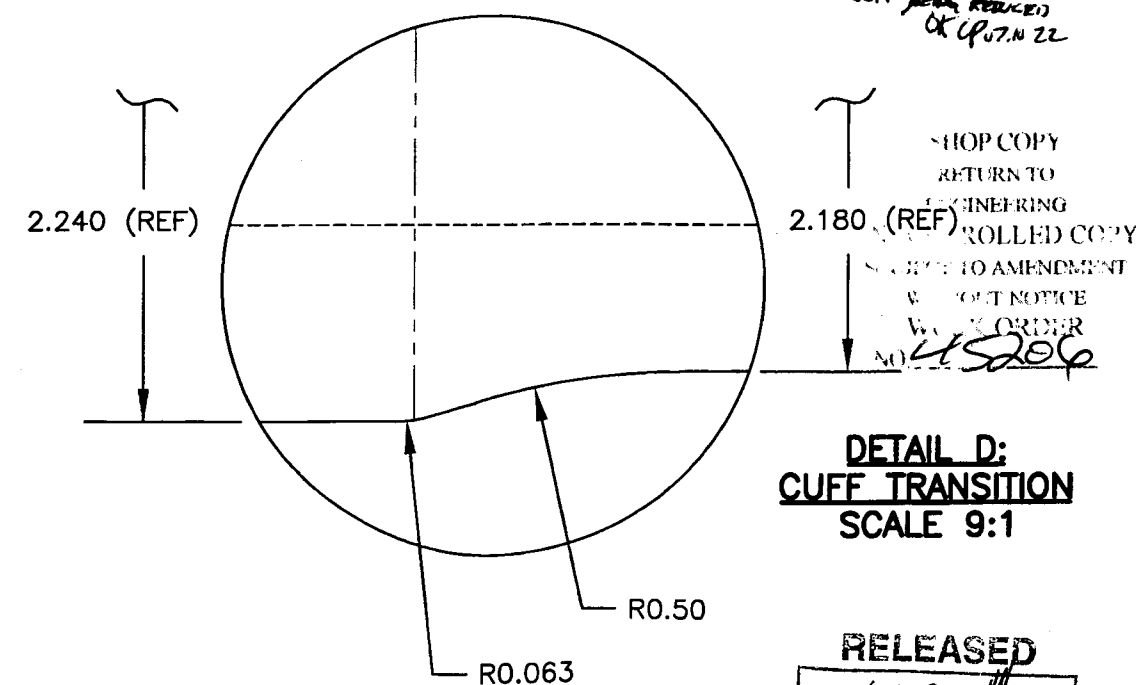
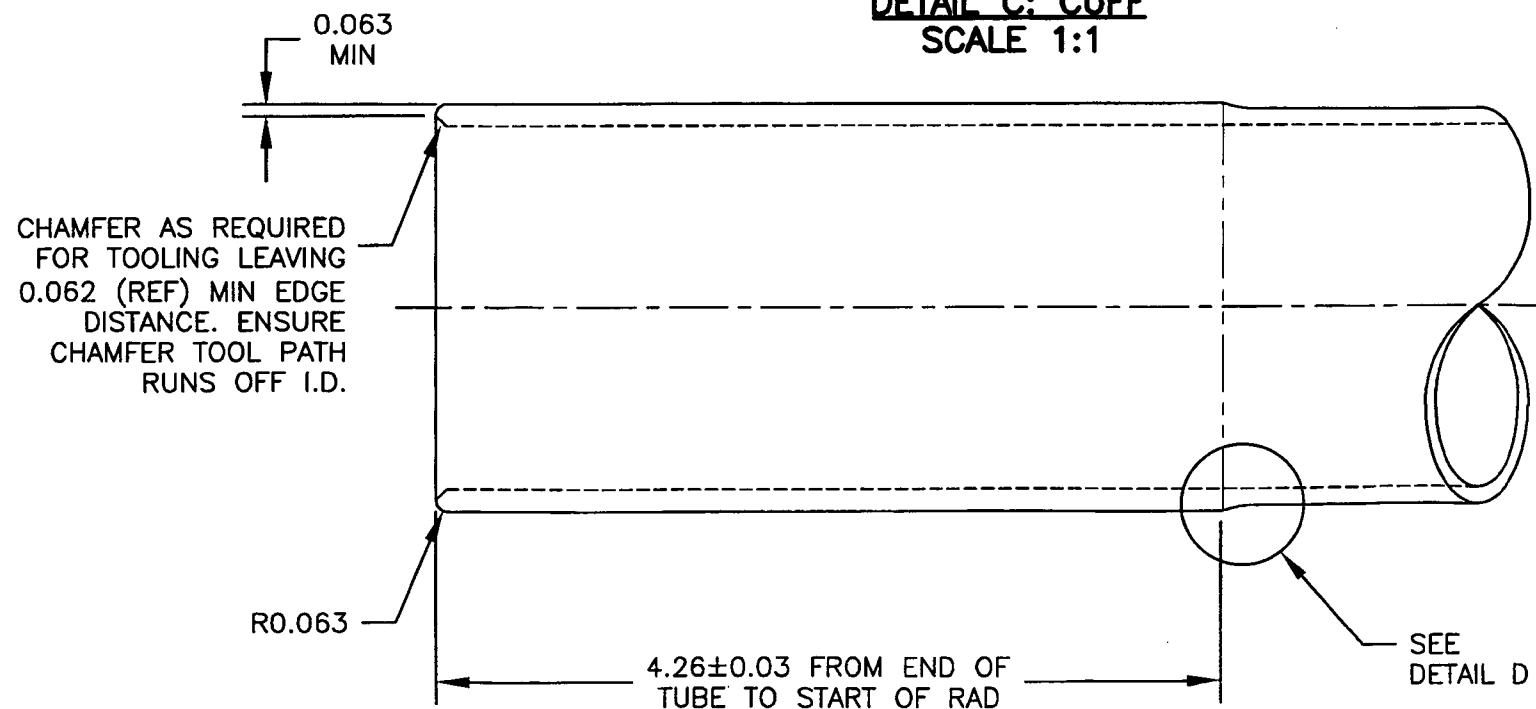
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		DATE	06.10.31	TITLE		DRAWING NO. D350-748-241	SCALE 1:8
						CROSSTUBE (AS 350/355 HI AFT)	



D350-748-241 MACHINING DETAIL

DETAIL C: CUFF
SCALE 1:1



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**DETAIL D:
CUFF TRANSITION**
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CHECKED	DP	APPROVED	DP	DRAWING NO.	REV. D
DATE	06.10.31	TITLE	CROSSTUBE (AS 350/355 HI AFT)	D350-748-241	SHEET 3 OF 3
		SCALE	1:4		

